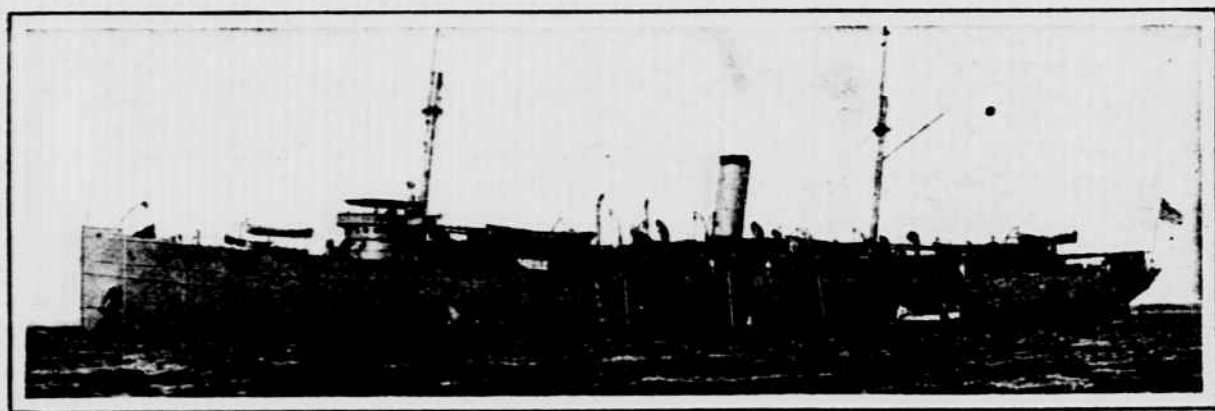


# THE DIXIE, TENDER TO ATLANTIC TORPEDO FLEET

By LIEUTENANT PAUL FOLEY, U. S. N.



The Dixie.

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**T**HE destroyers of the Atlantic torpedo fleet lately cruising in West Indian waters, and now operating in those of the upper Chesapeake, are accompanied for the first time in the history of the American navy by a tender adequately equipped as such.

The cruiser Dixie, familiar to all shipping men before her acquisition by the Government at the time of the Spanish-American War as the Morgan Line steamer El Rio, has been refitted for this duty.

Today, in the quiet waters of the Potomac, the York and the Patuxent, as before in the lee of those islands of the South, the stage of the bloodiest sea fights of history,—of Morgan the buccaneer, and of Drake, of the triumph of Rodney, and the humiliation of De Grasse,—the destroyers lie alongside overhauling their delicate machinery, receiving from the central power plant steam, electric current, or fresh water, as occasion may require. Upon the broad sweep of the Dixie's deck their crews find relief from the crowded quarters and the overheated, steam saturated, oil permeated atmosphere of their own vessels. Here are available washrooms, storerooms for clothing and spare parts, commodious sick quarters for the ailing or unfit, a well stocked library, a canteen, a barber shop; in short, all the comforts and conveniences of modern battleship life that heretofore have been denied to the men of the "dun-garee" navy, as it is affectionately termed by those who travel in the fast little black boats, solely because of the satisfaction found in the conquest of superheated steam.

However strong this appeal to the physical comfort of man, the tender is only incidentally a hotel. Essentially she is a repair and supply ship, designed to meet the needs of sixteen or more destroyers comprising the Atlantic fleet. The vessels composing it are practically identical in type, of eight hundred tons' displacement, turbine driven, and oil burning. In every respect they are bigger and abler vessels than their sisters of older date.

Sisters! There is an element of humor in referring to a wicked little torpedoboat as "she"; and yet, the more one knows of torpedo craft, the less incongruous seems the application of sex, because it happens that the method of handling them depends entirely upon the day of the week, and if by chance one uses Thursday's tactics on Tuesday, the result is commonly initiation of the skipper into the "Order of Bow Smashers," wherein nothing less than a two-inch dent counts.

The primary purpose of this fleet in its relation to the battleship fleet is that of a scouting force. The strength of a scouting force depends upon its mobility. Its mobility depends in the last analysis upon weight. In any vessel one can have practically any given feature developed to almost any extent, if willing to concede the space and weight necessary to effect it: speed, which means engine weight; hitting power, battery weight; cruising radius, fuel weight. Rarely, and least of all in the destroyer type, can one have all.

The balance of factors is drawn in such craft as fine as the skill of the naval architect can draw it, and cannot be disturbed without serious loss of efficiency. Every pound additional to the designed weight means increased draft and reduced speed. To travel fast, the vessels must travel light; and, traveling light, they cannot travel far unless they have a base,—either a fixed base, a navy yard, or a mobile base, a tender. Hence it is that this torpedo fleet, which is about to take its place on the first fighting line of the nation, has been made independent to no small extent by the splendid sufficiency of the equipment of its tender.

**T**HE most striking single feature of this equipment is the machine shop, which contains some twenty-six of the most modern motor-driven tools, covering in their range every mechanical operation. Photographs, or a mere enumeration of tools, convey little idea of the splendid sufficiency of this shop, which challenges the admiration of every visitor; of men, by its appeal to their sense of the practical, and of women, by the order, cleanliness, and shining, bright work on every hand. Here no whistle marks the beginning or the close of working hours. The whir of machinery continues through meal hours, and frequently far into the night; for torpedo repair work is invariably "hurry up" work, and more frequently rush work, be it a pump, a periscope, or the cylinder of a gas engine.

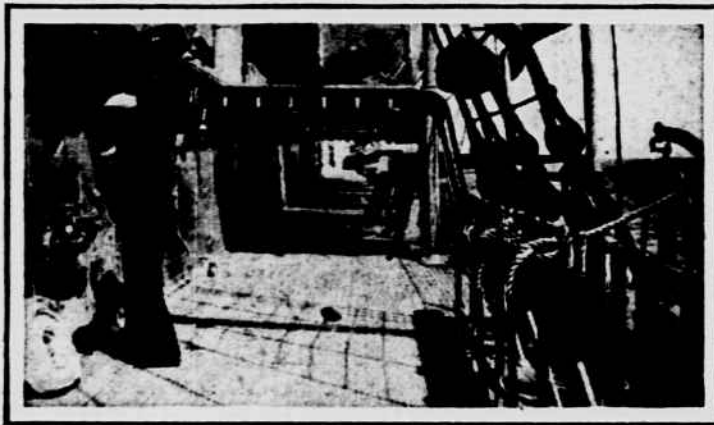
Of equal importance in relation to the general purpose, and equally interesting to the visitor, are the blacksmith shop and the foundry, where castings are made in iron, brass, and the tougher compositions, and where welding operations are effected by the spectacular thermit process, in which liquid steel, at a temperature

of more than five thousand degrees, is produced in less than five seconds.

In the matter of general ship supplies torpedo vessels are now operated on what is known as a "money allowance." The commanding officer of each destroyer is, in effect, given a letter of credit, within the limits of which he is practically the sole arbiter of the

kind and quantity of material drawn. Should the account be overdrawn, the supply automatically stops, and nothing further can be drawn without authority from the Navy Department. The possibilities making for economical and efficient administration, opened by such a plan, are thus manifestly very great. It requires, however, the establishment on the tender of a storehouse, containing a large reserve supply of stores.

**T**HIS store, known in the service as the naval supply fund, has reached in the Dixie its highest state of development afloat. The stock carried includes every item



At Work When in Port.



Dixie's Blacksmith Shop.

of ship equipment known in the naval establishment, all housed and administered under the most advanced business methods, reducing paper work to a minimum, and maintaining the entire stock, which aggregates more than five thousand separate items, independent of the personality of any individual or combination of individuals. So complete and so simple are the accounting methods in use, that a balance for quantity or value, or both, can be struck at any moment.

To meet the demands of the fleet in the matter of provisions, there is a cold storage plant having a capacity of something more than fifty thousand rations of fresh meat, and dry provision storerooms of indefinite capacity. The aim has been to keep men under war conditions; that is, to provide the necessities, rather than the luxuries, of life; but the system of centralized supply is so attractive in convenience, quality, and cost that even on the Atlantic Coast the destroyers subsist almost entirely from the tender.

There are electric bake ovens, having a capacity of something more than a thousand loaves of bread daily. These bake ovens are the latest expression of development in electric cooking appliances; and, while similar ones are projected for the new twenty-six-thousand-ton battleships, the Dixie is at present the only vessel in the navy so equipped. The electric oven is more economical on a large scale than the coal oven,

and the superiority of the product is, of course, marked. This, combined with the entire absence of dirt, coal, and all attendant troubles of coal, makes the electric installation very attractive.

Among the navies of Europe, torpedo tenders, or depot ships, as they are called on the Continent, have been in commission for years. The English have eight. Some—the Hecla, the Tyne, and the Vulcan—are vessels of the Dixie type; others—the Sapphire, the Blake, the Blenheim, the St. George, and the Leander—are older cruisers converted. The Blake will be remembered as the flagship of the English squadron that visited the United States during the Columbian Exposition of 1893, and anchored at the head of the long line of foreign ships in Hudson River.

The French tender is the Foudre, a vessel built on regular man of war lines, commissioned in 1895, and rated as a faster and more heavily armed ship than the Dixie, although of the same displacement. The allotment of space to engines and battery on the Dixie seems a happier adjustment than that of the French ship.

If high speed could be obtained without sacrificing something else, it might be of advantage; but a study of conditions likely to obtain in time of war points to the conclusion that no higher speed than the cruising speed of the battleship fleet—about fifteen knots—is necessary, as it does not seem within the probabilities of war that a destroyer fleet will get beyond supporting distance, either of its protected base or of the battleship fleet. The proper place for the tender will be either at the base or with the fleet auxiliaries, and not operating in actual company with the destroyers. Of the battery, also, it may be said that qualities in themselves intrinsically desirable are considered of less value in a tender than other qualities; storeroom space, for example, which they would, if included, have necessarily excluded. It seems the sounder policy to equip a tender not so much to fight herself or run away, as so to satisfy the needs of the destroyers that in the hour of need they can strike so quickly and so hard that it will be all over but the fireworks before the orchestra has finished the overture. This is the policy of Japan, which has equipped for a tender the Toyohashi, a vessel similar to the Dixie.

**T**HE tender idea in our own navy, after having been discussed for many years, first found expression in the Yankee, commissioned in 1908. The development of that vessel had advanced to some extent when she laid her nose on Hen and Chickens Reef, and occasioned an officer, facetiously inclined, to enter in his private log, "Here endeth the Parent Ship." But it was not so. For a time the activities of her officers and men were centered upon wrecking operations, rather than torpedo policy, and the days were full of incident and action.

At one stage of the salvage operations there were on board the Yankee,—lifted high and dry on a rocky reef,—besides her own officers and crew of two hundred men, the chief constructor of the navy, an assistant constructor from the New York yard, an hundred landmen from Newport assisting in the discharge of stores, thirty seaman-gunners from the torpedo station, sixty men of the Merritt & Chapman Wrecking Company with their bosses, forty men of the T. A. Scott Wrecking Company with their bosses, ten men of the Boston Tow-boat Company with their bosses, twenty men from the New York Navy Yard with their bosses, the crews of five submarines with their vessels anchored near, five surface torpedoboats, two colliers, and a fleet of tugs; and all went merrily onward, while the thick fog lingered overhead. After the Yankee sank in December, her officers and men were transferred to the Dixie, a sister ship, where the work, so unfortunately interrupted, was resumed.

The many special features that have been described

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The Machine Shop.